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(54) Title: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD COMPONENTS

(57) Abstract: A method for protecting a peptide from peptidase activity *in vivo*, the peptide being composed of between 2 and 50 amino acids and having a C-terminus and an N-terminus and a C-terminus amino acid and an N-terminus amino acid is described. In the first step of the method, the peptide is modified by attaching a reactive group to the C-terminus amino acid, to the N-terminus amino acid, or to an amino acid located between the N-terminus and the C-terminus, such that the modified peptide is capable of forming a covalent bond *in vivo* with a reactive functionality on a blood component. In the next step, a covalent bond is formed between the reactive group and a reactive functionality on a blood component to form a peptide-blood component conjugate, thereby protecting said peptide from peptidase activity. The final step of the method involves the analyzing of the stability of the peptide-blood component conjugate to assess the protection of the peptide from peptidase activity.

INTERNATIONAL SEARCH REPORT

 Int. Application No
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A. CLASSIFICATION OF SUBJECT MATTER		
IPC 7	C07K1/107 C07K14/605	C07K14/135 C07K14/645
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According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
IPC 7 C07K C12N A61K		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)		
EPO-Internal, WPI Data, PAJ, MEDLINE, BIOSIS		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 602 290 A (POULETTY PHILIPPE ;POULETTY CHRISTINE (US)) 22 June 1994 (1994-06-22) column 2, line 1 - line 22 column 8, line 25 - line 33; claims	1-10, 12, 13, 16, 21
X	WO 95 10302 A (REDCELL INC) 20 April 1995 (1995-04-20) page 18, line 10 - page 19, line 1	1-10, 12, 13, 16, 21
A	US 5 580 853 A (SYTKOWSKI ARTHUR J) 3 December 1996 (1996-12-03) column 3, line 42 - column 4, line 38 column 5, line 21 - line 4 column 7, line 38 - line 43	1-10, 12, 13, 16, 21
	-/-	
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.	<input checked="" type="checkbox"/> Patent family members are listed in annex.	
* Special categories of cited documents:		
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Fuhr, C

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 654 276 A (BARRETT RONALD W ET AL) 5 August 1997 (1997-08-05) column 3, line 28 - line 38 column 17, line 48 -column 18, line 8; claims -----	1-5
P,X	WO 99 48536 A (CONJUCHEM INC ;HOLMES DARREN L (CA); BRIDON DOMINIQUE P (CA); EZRI) 30 September 1999 (1999-09-30) claims; examples -----	1-26
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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Present claims 1-26 relate to an extremely large number of possible compounds and methods. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds and methods claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the general concept of the invention i.e. the method of activating pharmaceutically or biologically active peptides using maleimido- or succinimido groups; as a result the activated peptides bind to blood components like albumin which decreases susceptibility for protease degradation. The search was directed to the underlying concept. The search was not direct to retrieve compounds or conjugates falling under the scope of claims 1-5 or the examples.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. l. Application No

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